

09/633,806
YOR920000175

REMARKS

Claims 1, 6-14 and 19-26, are all the claims presently pending in the application. New claim 26 is added.

It is noted that the claims have been amended solely to more particularly point out Applicants' invention for the Examiner, and not for distinguishing over the prior art, narrowing the claim in view of the prior art, or for statutory requirements directed to patentability.

It is further noted that, notwithstanding any claim amendments made herein, Applicants' intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "**Version with markings to show changes made**".

Claims 9-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite and the Examiner objects to claims 22 and 23 for dependency upon canceled claims. Applicants believe that the claim amendments above address these informalities and request that the Examiner reconsider and withdraw this rejection and objection.

Claims 1, 6, 7, 9-11, 14, 19, 20, 22, 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art, (page 1-4, line 7).

Claims 8, 12, 13, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art in view of Strongin (U.S. Patent No. 6,304,935) (hereinafter "Strongin").

Claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art in view of Miyamoto et al. (U.S. Patent No. 6,097,364) (hereinafter "Miyamoto").

These rejections are respectfully traversed in the discussion below.

09/633,806
YOR920000175

I. THE CLAIMED INVENTION

Applicant's invention, as defined for example in independent claim 1 (and substantially similarly in independent claim 9 and 14) is directed to a system (and method) for displaying information including an extended bus bridge, a graphics adaptor coupled to the extended bus bridge, and a monitor coupled to the graphics adaptor to display the information. A serial link interconnects the portions of the extended bus bridge.

The extended bus bridge includes a first portion and a second portion, The first portion includes a first local bus based on a first protocol and a first interface to convert a serial signal into said first protocol. The second portion includes a second local bus based on the first protocol and a second interface to convert the first protocol into the serial signal. The first protocol is defined by a standard of a local internal bus of a computer.

A feature of the present invention is that the graphics adaptor is localized to the monitor and the graphics adaptor and the monitor form a display unit (e.g. see page 3, lines 9-12; page 5, lines 7-10, page 6, lines 8-9; and page 10, lines 8-9).

An exemplary configuration of the system (and method) for displaying information including an extended bus bridge where the graphics adaptor is localized within the monitor, is shown in Figs. 3-4 of the application.

With such novel and unique features in the claimed combination, a system for displaying information with a connection between a PC and a monitor can avoid the problems of having a bottleneck in the system caused by having to carry all of the bandwidth of the high resolution image in a connecting cable.

The conventional systems, such as those discussed below and in the Related Art section of the present application, do not have such a structure, and fail to provide for such an operation.

Indeed, such features are clearly not taught or suggested by the cited references.

09/633,806
YOR920000175

II. THE PRIOR ART REFERENCES

The Examiner alleges that the Applicants' Admitted Prior Art renders obvious the present invention as defined by claims 1, 6, 7, 9-11, 14, 19, 20, 22, and 23, relying on *In Re Japikse* and *Nerwin v. Erlichman*.

The Examiner further alleges that *In Re Japikse*: "... recognizes that the relocation of well known element is normally not desired toward patentable subject matter." The Examiner additionally alleges that *Nerwin v. Erlichman*: "... recognizes that the separation of well known element is normally not desired toward patentable subject matter and use the serial link 102 in the AAPA system to connect two portions of the bus together to transfer display data for the system."

Applicants submit that the Examiner mischaracterizes both of the above-cited references. Indeed, it is not well understood what the Examiner is attempting to say about either of these cases.

First, relative to *Japikse*, it is noted that even MPEP 2144.04 VI C., wherein this case is discussed, does not at all characterize *Japikse* in the wording of the Examiner. That is, the MPEP wording is: "*Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device*" (Emphasis by Applicants). The Court's actual wording is: "*As to that limitation it was held that there would be no invention in shifting the starting switch disclosed by Cannon to a different position since the operation of the device would not thereby be modified. We find no error in the holding as to claim 3.*"

In contrast, the present invention does not satisfy the rationale upon which *Japikse* is based. That is, in the present invention, the operation of several devices in the system is modified. First, the graphics adaptor 104 is no longer in the PC box 110 (reference Figure 1 of present application). Second, the monitor 101 includes the graphics adaptor 104, previously integrated in the PC box 110. Third, the analog/digital cable 102 interconnecting the PC box 110 and monitor 101 is replaced with a high speed serial cable. Fourth, the present invention includes an extended bus bridge that is not present in Applicants' Admitted

09/633,806
YOR920000175

Prior Art shown in Figure 1.

This extended bus bridge includes, in the PC box 310, 410 (see Figures 3 and 4) a bus 305, 405 considered in the art as being localized inside a computer (e.g., a PCI or AGP bus), plus a chip 305A, 405A to convert the localized bus into a serial signal. In the monitor, the extended bus bridge includes again a bus (e.g., PCI Bus 1, AGP Bus 1) considered in the art to be localized to a computer (not localized to a monitor, as in the present invention), plus a chip to convert the serial link signal back into the "computer localized bus" protocol to interface with the graphics adapter 304,404 in the monitor.

Thus, it would seem that the Examiner mistakenly considers that, because the present invention includes a monitor 301, 401 driven by a "CPU + Host PCI Bridge" 303, 403, the "operation of the device would not be modified" (to use the wording of Japikse). As explained above, in reality, the present invention modifies the PC box 110, the interconnecting cable 102, and the monitor 101 of the prior art shown in Figure 1.

Importantly, to achieve these modifications, the present inventors have had to import a bus considered in the art as being localized in a PC box 110 into a monitor 101. The Examiner cannot simply ignore this conventional practice in the art.

Second, relative to Nerwin, the Examiner's point is unclear. This Board of Appeals case does not seem to be discussed in the MPEP. The relevant wording on page 179 in the USPQ would seem to be: *"The mere fact that a given structure is integral does not preclude its consisting of various elements.... We are of the opinion, however, that while a given structure may in one sense be considered a single element, in another sense it may be so formed as to consist of several elements depending upon the functions to be performed by such elements."*

These words fall far short of the Examiner's characterization that: *"separation of well known element is normally not desired toward patentable subject matter and use the serial link 102 in the AAPA system to connect two portions of the bus together to transfer display data for the system."*

Applicants request that the Examiner clarify the perceived significance of the wording in Nerwin in the present evaluation. Clearly, the present invention, by separating the graphics adapter 104 from the PC box 110 and placing it adjacent to the monitor 101 has overcome a

09/633,806
YOR920000175

data bandwidth bottleneck in the conventional system shown in Figure 1, while simultaneously addressing the problem of electromagnetic radiation. The wording in Nerwin is not at all applicable without some type of reasonable clarification by the Examiner.

Thus, the rejection currently of record clearly fails to meet the initial burden of a *prima facie* rejection under 35 USC §103(a). Clearly, there is no teaching or suggestion in Applicants' Admitted Prior Art shown in Figure 1 of an "extended bus bridge", or of a display device that incorporates the graphics adapter, or of a serial bus that interconnects the extended bus bridge portions.

Hence, turning to the clear language of independent claim 1 (and similarly that of independent claims 9 and 14), there is no suggestion of: "an extended bus bridge, said extended bus bridge including a first portion and a second portion, said first portion comprising a first local bus based on a first protocol and a first interface to convert a serial signal into said first protocol, said second portion comprising a second local bus based on said first protocol and a second interface to convert said first protocol into said serial signal, said first protocol defined by a standard of a local internal bus of a computer; a graphics adaptor coupled to said extended bus bridge at the first portion of said extended bridge; a central processing unit (CPU) coupled to said second portion of said extended bridge; a monitor coupled to said graphics adaptor to display the information, such that said graphics adaptor is localized to said monitor and said graphics adaptor and said monitor comprise a display unit; and a serial link for coupling together said first and second portions of said extended bus bridge".

Applicants submit, therefore, that claims 1, 6, 7, 9-11, 14, 19, 20, 22, 23 are clearly patentable over Applicants' Admitted Prior Art.

The Examiner relies on Strongin to teach: "... *a portion of a AGP bus bridge 104 coupled to the graphic processor 202*" and on Miyamoto to teach: "... *a display control apparatus in which only the information that changes is transferred to the display unit.*" However, neither Strongin nor Miyamoto overcomes the basic deficiency identified above.

Relative to the rejection for claims 8, 12, 13, and 21 based on Strongin, Applicants have already explained on the record why Strongin is not properly combinable with Applicants' Admitted Prior Art. For the sake of brevity, this explanation is not repeated.

09/633,806
YOR920000175

Essentially, Applicants earlier pointed out that the architecture in Strongin differs from that Figure 1 of the present application. The Examiner cannot simply ignore the required architecture in Strongin and pluck out components in isolation in one circuit environment and place them into another circuit environment.

That is, such simple circuit revision would clearly violate the guideline of MPEP 2143.01: "*The proposed modification cannot change the principle of operation of a reference.*" As previously explained on the record, the Examiner's urged combination would change the principle of operation of both the Applicants' Admitted Prior Art and Strongin.

Therefore, the rejection currently of record clearly fails to meet the initial burden of a *prima facie* rejection under 35 USC §103(a) since the combination would be improper, and claims 8, 12, 13, and 21 are clearly patentable over Applicants' Admitted Prior Art and Strongin.

Finally, relative to the rejection for claims 24 and 25, the rejection currently of record fails to explain how the information processing system 2 shown in Figure 1 of Miyamoto can be integrated into the Applicants' Admitted Prior Art without, again, changing the principle of operation of each system. That is, the Miyamoto unit 2 clearly receives a video signal, including a sync signal from a CRT interface module 16. This concept is clearly different from the system shown in Applicants' Figure 1. Again, the Examiner incorrectly ignores the above-cited MPEP guideline and merely incorporate components from one circuit environment into a different circuit environment.

Therefore, Applicants submit that claims 24 and 25 are clearly patentable in view of Miyamoto.

Additionally, the other prior art of record has been reviewed, but it too, even in combination with Strongin or Miyamoto, fails to teach or suggest the claimed invention.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 6-14 and 19-26, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above

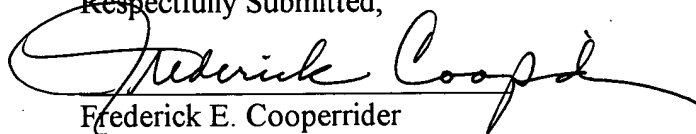
09/633,806
YOR920000175

application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,



Frederick E. Cooperrider
Reg. No. 36,769

Date:

10/3/03

McGinn & Gibb, PLLC

8321 Old Courthouse Rd. Suite 200

Vienna, VA 22182-3817

(703) 761-4100

Customer No. 21254